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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,945	10/05/2005	Manfred Schorghuber	SCHORGHUBER ET AL 1 PCT	3616
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COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			NGUYEN, HUNG D	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,945	Applicant(s) SCHORGHUBER ET AL.	
	Examiner HUNG NGUYEN	Art Unit 4118	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/5/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/5/2005, 1/4/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to the amendment filed on 10/05/2005. As directed by the amendment: claims 1-15 have been amended, claim 16 has been cancelled and new claim 17 has been added. Thus, claims 1-15 and 17 are presently pending in this application.

Drawings

2. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: Page 1, Par. 4, line 3 of the Specification recites "puffer" which appears to be a misspelling of the word "buffer"

Appropriate correction is required.

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4. The disclosure is objected to because of the following informalities: Page 8, Par. 4, line 3 of the Specification recites “electrode cable 17a” which appears to be a wrong reference. It should be “electrode cable 17”.

Appropriate correction is required.

5. The disclosure is objected to because of the following informalities: Page 14, line 5 of the Specification recites “the hose package 10” which appears to be a wrong reference. It should be “the hose package 23”.

Appropriate correction is required.

6. The disclosure is objected to because of the following informalities: Page 15, Par. 3, line 6 of the Specification recites “the welding wire 1” which appears to be a wrong reference. It should be “the welding wire 13”.

Appropriate correction is required.

7. The disclosure is objected to because of the following informalities: Page 16, Par. 3, line 6 of the Specification recites “of the wire core 35” which appears to be a wrong reference. It should be “of the wire core 30”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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9. Claim 1 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Regarding claim 1, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

11. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what the applicant means by "further lines" especially since there is no prior mention or definition of what is meant by "lines".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1, 2, 4, 15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Taylor et al. (US 3,901,425).

14. Regarding claims 1 and 2, as best understood, Taylor et al. discloses a buffer device for a welding wire 12 (Fig. 1), wherein a wire buffer, in particular a wire buffer storage 16 (Fig. 1), is arranged between a wire feeder 14 (Fig. 1) provided on the

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welding apparatus (Fig. 1), and a further wire feeder 18 (Fig. 1) preferably within the welding torch 20 (Fig. 1) and the welding wire 12 (Fig. 1) is conducted between the two wire feeders 14 and 18 (Fig. 1) within the wire core 98 (Fig. 2), where in the wire buffer storage 16 (Fig. 1) is designed in a manner that the wire core 98 (Fig. 2) is fixed on one end in the region of the welding apparatus, with its other end being freely movable (Fig. 3, Col. 6 Lines 38-47), wherein the wire core 98 (Fig. 2) together with the welding wire 12 (Fig. 1), at least over a partial region, is arranged to be freely movable within a wire guide hose 96 (Fig. 2) having a substantially larger cross section of the wire core 98 (Fig. 2), and wherein the storage volume of the wire buffer storage 16 (Fig. 1) is defined by the cross section and the length of the substantially larger wire guide hose 96 (Fig. 2).

15. Regarding claim 4, Taylor et al. discloses the wire guide hose 96 (Fig. 2) is arranged with in a hose package 16 (Fig. 1).

16. Regarding claim 15, Taylor et al. discloses a welding plant including a welding apparatus (Fig. 1), a hose package 16 (Fig. 1) and a welding torch 20 (Fig. 1), wherein the hose package 16 (Fig. 1) connects the welding torch 20 (Fig. 1) with the welding apparatus (Fig. 1), and a device designed as a wire buffer storage 16 (Fig. 1) and arranged between two wire feeders 14 and 18 (Fig. 1), wherein said wire buffer storage is 16 (Fig. 1) formed in the hose package 16 (Fig. 1).

17. Regarding claim 17, Taylor et al. discloses a welding plant including a welding apparatus (Fig. 1), a hose package 16 (Fig. 1) and a welding torch 20 (Fig. 1), wherein the hose package 16 (Fig. 1) connects the welding torch 20 (Fig. 1) with the welding apparatus (Fig. 1), and a device designed as a wire buffer storage 16 (Fig. 1) and

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arranged between two wire feeders 14 and 18 (Fig 1), wherein said wire buffer storage 16 (Fig. 1) is formed in the hose package 16 (Fig. 1)

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. (US 3,901,425).

20. Regarding claim 3, Taylor et al. discloses all the claimed features except for the inner diameter of the wire guide hose is at least 1.5 times larger than an outer diameter of the wire core. However, Taylor et al. shows the wire guide hose 96(Fig. 2) is larger than the wire core 98(Fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Taylor et al to modify the inner diameter of the wire guide hose is at least 1.5 times larger than an outer diameter of the wire core for the purpose of allowing sufficient space in the hose for the wire to freely move.

21. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. in view of Ueyama et al. (US Pat 4,102,483).

22. Regarding claim 5, Taylor et al. discloses all the claimed features except for the wire guide hose extending in a spiral-shaped manner within said hose package.

Ueyama et al., however, teaches that a wire guide hose will have less contact area, less

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friction resistance and less wire guide load if it extends in a spiral manner in the wire hose (Fig. 18 and Col. 1 line 36-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Taylor et al. to extend the wire hose in a spiral-shaped manner within the hose package, as taught by Ueyama et al., for the purpose of providing less contact area, less friction resistance and less wire guide load.

23. Regarding claim 6, Taylor et al. discloses all the claimed features including further lines (conduit, Col. 4 Lines 22-29) arranged within the hose package, except for the further lines arranged within the hose package spirally extending wire guide hose. Ueyama et al., however, teaches a spirally curved welding wire in a wire guide bore of a conduit cable (Fig. 18, Col. 2 Lines 32-34). Since the hose package contains both a spirally extending guide wire and further lines, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have the further lines arranged within the helically extending the wire guide hose, (as opposed to next to, or outside the spirally extending wire guide), as taught by Ueyama et al., for the purpose of minimizing the diameter of the hose package so it is easier to handle.

24. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. in view of G. Savard et al. (US Pat 2,964,612).

25. Regarding claim 14, Taylor et al. discloses all the claimed features except for the wire guide hose is preformed in a spiral-shaped manner. G. Savard, however, teaches the electrodes made from two to three bare-surfaced wires twisted together in a spiral (Fig. 1- 4 and 8). Therefore, it would have been obvious to one of ordinary skill in the

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art at the time of the invention was made to modify Taylor et al. to have the wire hose is preformed in a spiral-shaped manner, as taught by G. Sarvard et al. for the purpose of allowing faster continuous electrode fed than compared to a stick electrode (Col. 4 Lines 50-53).

26. Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. in view of Bryce et al. (US Pat 4,187,411).

27. Regarding claim 7, Taylor et al. discloses all the claimed features except for the wire guide hose is arranged outside a hose package. Bryce et al., however, teaches that a wire guide hose 4 (Fig. 1) is arranged outside a hose package 9 (Fig.1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Taylor et al. to arrange the wire guide hose outside the hose package, as taught by Bryce et al., for the purpose of reducing the noise from the wire core that may couple to the power cable that monitor the welding wire in the torch (Col. 7 Lines 56-63).

28. Regarding claim 10, Taylor et al. discloses all the claimed features except for detecting the quantity of the welding wire of the wire buffer storage are arranged, said detection means detecting the longitudinal movement of the wire core and, in particular, the free end of the wire core. Bryce et al., however, teaches using a module 12 (Fig. 1) to monitor the stick-out distance 11 (Fig.1) of the welding wire 2 (Fig.1) beyond the tip 10 (Fig. 1) of the welding torch 1 (Fig.1, Col. 6 Lines 6-9). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to

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modify Taylor et al. to monitor the welding wire, as taught by Bryce et al., for the purpose of determining how much welding wire is left.

29. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. in view of Bryce et al. (US Pat 4,187,411) and further view of Parmelee et al. (US Pat. 4,731,518).

30. Regarding claim 8, Taylor et al. and Bryce et al. disclose all the claimed features except for the wire guide hose arranged around the hose package. Parmelee et al., however, teaches that welding cable C (Fig. 1) is helically wrapped by the power source PC (Fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Taylor et al. to have the wire guide hose is arranged around the hose package in a helix-shaped manner, as taught by Parmelee, for the purpose of providing a simple construction that is economical to manufacture and easy to weld with (Col. 2 Lines 50-53).

31. Regarding claim 9, Taylor et al. and Bryce et al. disclose all the claimed features except for the wire guide hose arranged to helically extend about a carrier material independently of the hose package. Parmelee et al., however, teaches that welding cable C (carrier material, Fig. 1) is helically wrapped by the power source PC (Fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Taylor et al. to have the wire guide hose arranged to helically extend about a carrier material independently of the hose package, as taught by Parmelee, for the purpose of providing a simple construction that is economical to manufacture and easy to weld with (Col. 2 Lines 50-53).

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32. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. in view of Strybel (US Pat 4,458,719).

33. Regarding claim 11, Taylor et al. discloses all the claimed features except for the wire buffer storage is comprised of a structural unit comprising the wire guide hose, on which a terminal element, particularly a quick lock is arranged on either end, and the wire core. Strybel, however teaches a quick coupler service fitting for quick connection between a first coupler adapter to a service hose (Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Taylor et al. to replace the screws 92 (Fig. 3) and 154 (Fig. 5) with the quick coupler, as taught by Strybel, for the purpose of allowing faster replacement or interchanging of the wire core.

34. Regarding claim 12, Taylor et al. discloses all the claimed features except for the wire buffer storage is exchangeable without requiring any tool. Strybel, however teaches the quick coupler service fitting for quick connection between a first coupler adapter to a service hose (Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Taylor et al. to replace the screws 92 (Fig. 3) and 154 (Fig. 5) by the quick coupler for changing the wire buffer storage without requiring any tools by pressing a finger manipulation portion 52 (Fig. 2), as taught by Strybel, for the purpose of easy removing or replacing of the wire buffer as needed.

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35. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. in view of Strybel (US Pat 4,458,719) and further view of Huismann et al. (US Pat. No. 7,165,702 B2).

36. Regarding claim 13, Taylor et al. and Strybel disclose all the claimed features except for a guide element of the terminal element, particularly quick lock, projects into a sensor for detecting the longitudinal movement of the wire core. Strybel already teaches the quick coupler and Huismann et al. teaches a sensor for detecting the longitudinal movement of the wire core (Col. 6, Lines 54-62) to monitor the wire core movement. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Taylor et al. to replace the screws with the quick coupler for faster replacement or interchange, as taught by Strybel, and to include the sensor for detecting the longitudinal movement of the wire core (Col. 6, Lines 54-62) as taught by Huismann et al, for the purpose of providing a suitable sensor that can be used to control the wire feed motor with more precision.

Conclusion

37. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wimroither (US Pat. 6,200,519 B1) discloses a welding torch with a contact socket and feed device. Wilkens (US Pat. 3,630,425) discloses an electrode wire advance for arc welding. G.G Landis et al. (US Pat. 2,790,925) discloses a combined electrode feed conduit and driving means.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG NGUYEN whose telephone number is (571)270-7828. The examiner can normally be reached on Monday-Friday, 7:30AM-5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quang Thanh can be reached on (571)272-4982. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quang D. Thanh/
Supervisory Patent Examiner,
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